

Timesharing Anyone?

Altair™ Timesharing BASIC for microcomputers is a unique and dynamic package with powerful capabilities that challenge a field dominated by larger, more costly computers.

Altair Timesharing BASIC and Altair Timesharing Disk BASIC are magnified versions of the powerful and efficient Altair Extended BASIC. Each version includes increased capabilities to accommodate as many as eight different programs running simultaneously and independently within the system.

Instantaneous Keyboard Response

Input and output are interrupt driven and fully buffered to provide virtually instantaneous keyboard response even when the system supports the maximum number of users. The output buffers empty more quickly than they are filled, thus it will appear the CPU is dedicated to each individual terminal.

High Speed Systematic Job Rotation

Operating within a highly efficient round-robin system, the CPU suspends operation of a job currently being executed, stores the address of the next instruction and moves to the next job. Each job is served a hundred millisecond slice of its program.

Partitioned Memory Locations

Established as a Fixed Partition System, each job is confined to a unique area of memory. Users may then access only their individual jobs, not the system or other jobs. This protects jobs from alteration or destruction. The size of the memory area must be established with a minimum of 1024 bytes during initialization. Memory areas may be of different sizes, depending on need. Each program area contains:

- BASIC program text
- Variable and string space
- Work space
- Approximately 300 bytes of the timesharing system



I/O Device Support

A variety of input devices can be linked to Altair Timesharing BASIC and Altair Timesharing Disk BASIC. This flexibility permits the use of CRT's for high speed data manipulations and Teletypes™ and hard copy terminals when hard copy output is required.

Altair Timesharing Disk BASIC facilitates the listing of programs on a line printer. Programs await listing in a queue to prevent mixing different jobs. Users receive a message if the line printer is unavailable.

Versatile Program Storage and Loading Capabilities

Altair Timesharing Disk BASIC provides rapid loading and program retrieval since all programs reside on a floppy disk. Read and modify passwords may be specified for program files to limit access by other users.

Altair Timesharing BASIC can be loaded from paper tape or audio cassette. Programs may be stored for later use on paper tape.

Other Features

- Control of a specific job may be transferred from one terminal to another with a single command.
- Various control characters allow suspension and resumption of each job without loss of data.
- Extensive diagnostics for program debugging.
- Automatic line numbering.
- Both versions of Altair Timesharing BASIC furnish line-oriented text editor with line and character manipulation capabilities.

Educational Applications

A single Altair 8800b loaded with either version of Timesharing BASIC can be utilized by several students performing independent operations. One student practices program development, another makes use of Timesharing BASIC's extensive diagnostics to debug a program while several other students calculate complicated equations. All program activity occurs simultaneously with no discernable response delay.

Computer oriented education need not be limited to programming classes. An Altair Timesharing System may be a valuable visual tool to assist in the instruction of science, math and engineering classes and as an introduction to the various aspects of computer technology to solve real world problems.

An Altair Timesharing System stimulates interest and provides a vehicle for discussion for the younger student. Children find it particularly fascinating to use a computer to solve arithmetic problems.

Scientific and Engineering Uses

Engineering firms and scientific labs currently using programmable calculators will benefit from the multi-purpose capabilities of a microcomputer for complex math routines and statistical manipulation. An Altair 8800b operating with Timesharing BASIC provides a number of individuals with access to graphic or tabular output in addition to the following mathematical functions; SIN, COS, TAN, LOG, SQR, SGN, ABS, INT and RND.

Required Hardware

The following hardware is needed to support both versions of Altair Timesharing BASIC.

- Altair 8800 series mainframe and CPU
- A minimum of 32K RAM
- Vector interrupt/Real time clock board
- Up to 4 2SIO boards to interface terminals (no other types of I/O boards can be supported.)
- Line printer (optional for Altair Timesharing Disk BASIC.)

The following products are optional for Altair Timesharing BASIC loading and required for Altair Timesharing Disk BASIC.

- An Altair floppy disk drive and controller.
- 88 PROM board.



mits

2450 Alamo S.E. / Albuquerque, New Mexico 87106